REMARKS

In the Office Action mailed October 18, 2005, the Examiner rejected claims 1, 2, 4-8, 11-17, 22 and 25-27 under 35 U.S.C. §102(b) as being anticipated by Shlomi et al. (USP 6,199,587). Applicant appreciates the indication that claims 9-10 are allowable. Applicant likewise appreciates the indication that the remarks previously presented on September 13, 2005 were found persuasive.

Applicant has amended claims 1, 5, 6, 11, and 22-24 to further define the invention over the art of record. Applicant has also presented new claims 28 and 29. Claims 28 and 29 are presented in independent form and incorporate the subject matter of claims 9 and 10, respectively.

Claim 1 has been amended to clarify that the solenoid includes a solenoid housing and a return spring that at least partially extends outside the solenoid housing. In contrast, Shlomi et al., as best illustrated in Figs. 1-2, 6A-6C, 9-13, 18A, 18B, and 19, discloses a solenoid valve wherein a biasing spring (42) is arranged so as to be entirely disposed within the solenoid housing which is formed by a lower housing (30) and an upper housing (70). This internal placement of the biasing spring is independent of whether the plunger disclosed by Shlomi et al. is disposed entirely within the housing, such as in the embodiments of Figs. 1, 2, 6A-6C, 11-13, 18A, 18B, and 19, or extends outside the housing, such as in the embodiments of Figs. 9-10. Thus, Shlomi et al. fails to teach or suggest that called for in claim 1, as amended.

In light of the amendment to claim 1, Applicant has canceled claim 4 and amended claims 5-6. Claims 2 and 5-10 are believed to be allowable for at least depending upon an otherwise allowable claim.

Claim 11 has also been amended to further define the invention from the art of record. Specifically, claim 11 has been amended to further define the non-magnetic spacer as remaining in a fixed position during movement of the movable armature. Shlomi et al., however, discloses a solenoid valve having a non-magnetic spacer that moves with the solenoid plunger. That is, the reference discloses a first sealing dome (44), which the Examiner referenced as "a non-magnetic spacer [44]" in the office action mailed October 18, 2005. OFFICE ACTION, October 18, 2005, p. 3. In Figs. 6A-6C, which illustrate translation of the solenoid valve, the sealing dome is shown as translating with the plunger. In fact, one skilled in the art will readily appreciate that the sealing dome must move with the plunger; otherwise, the port (16) would not open by movement of the plunger. In other words, when the plunger is at the position illustrated in Fig. 6A, the sealing dome seals the fluid path through port (16). On the other hand, when the plunger is at the position illustrated in Figs. 6B or 6C, the plunger moves so as to unseal port (16) via unseating of the sealing dome. Thus, not only does Shlomi et al. not teach an electromagnetic switching

apparatus such as that called for in claim 11, but the reference teaches away from such a construction. Accordingly, claims 11-17 are believed to be in condition for allowance.

Claim 22 has been amended to further define the second magnetic circuit as occurring between the plunger and a stationary attracting stud. Moreover, the claim has been amended to clarify that "the plunger is linearly spaced from the stationary attracting member by the first magnetic circuit and driven linearly towards the attracting member by the second magnetic circuit." The solenoid of Shlomi et al. is constructed to have a permanent magnet (72) and ferrous ring (54) that is secured to a non-ferrous plunger (42). *See* col. 6, ll. 30-31, 37. Further, as shown in Fig. 1, the ferrous ring is positioned at the end of the plunger proximate the permanent magnet. As a result of this construction and further shown in Figs. 1 and 6A-6C, the ferrous ring moves linearly between the permanent magnet and the armature. Thus, the ferrous ring does not remain stationary during translation of the plunger.

Also, the ferrous ring remains in contact with the plunger independent of plunger movement. In fact, such a continuous engagement between the ferrous ring and the plunger is necessary to maintain contact between the ferrous ring and cylindrical member (56) and iron core (58). That is, the connection between the ferrous ring and iron core through the cylinder member is necessary so that the north pole that appears at the lower end of the iron core results in a south pole appearing on the ferrous ring. *See* col. 10, ll. 1-12. In contrast, claim 22 calls for the plunger to be spaced from the stationary attracting member by the first magnetic circuit and driven linearly towards the attracting member by the second magnetic circuit. Accordingly, the subject matter of claim 22 is believed to be patentably distinct from that taught and/or suggested by the art of record. Allowance thereof is requested.

Claim 23 has likewise been amended to further define the invention over the art of record. Specifically, claim 23 has been amended to further define the solenoid kit as including an attracting stud having a second fixed polarity that is opposite the first fixed polarity of a permanent magnet. Moreover, the claimed armature is further defined as being configured to move linearly between the attracting stud and the permanent magnet. Contrastingly, the solenoid of Shlomi et al. is constructed without both a permanent magnet and a fixed polarity attracting stud. That is, Shlomi et al. teaches a solenoid constructed to have a fixed permanent magnet (72) and a ferrous ring (54) that is secured to and translates with the plunger. As shown in Fig. 1, the ferrous ring is positioned at the end of the plunger proximate the permanent magnet. As a result of this construction and further shown in Fig. 1, the ferrous ring moves linearly between the permanent magnet and the armature. The solenoid kit called for in claim 23, however, is

constructed such that the armature is positioned between a permanent magnet and an attracting stud.

Additionally, as called for in claim 23, the attracting stud is also of fixed polarity. As best shown in Figs. 6A-6C, Shlomi et al. explicitly teaches that the polarity of the ferrous ring changes during energization of the coil. *See* col. 9, l. 59 – col. 10, l. 30. Accordingly, the solenoid disclosed by Shlomi et al. fails to teach or suggest that called for in claim 23. Allowance of claims 23-27 is therefore requested.

Therefore, in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1, 2, 5-17, 22, 25-29.

A credit card authorization in the amount of $450.00 is also enclosed for fees associated with entering the claims newly presented herein.

Additionally, Applicant appreciates any assistance the Examiner can provide in facilitating a decision by the Office of Petitions regarding the petition filed August 17, 2004 seeking supervisory review of the restriction requirement made final on June 30, 2004. To date, Applicant has yet to receive a decision from the Office of Petitions.

Applicant appreciates the Examiner's consideration of these Amendments and Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,

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